

*Phyllocomus*, Grube.

*Phyllocomus crocea*, Grube (Pl. XLVII. fig. 11 ; Pl. XXVIA. fig. 25 ; Pl. XXXVIIA. fig. 6).

*Phyllocomus crocea*, Grube, Monatsber. d. k. preuss. Akad. d. Wiss. Berlin, August 1877, p. 543.

*Habitat*.—Dredged at Station 151 (off Heard Island), February 7, 1874 ; lat. 52° 59' S., long. 73° 33' E. ; depth, 75 fathoms ; surface temperature, 36°·2 ; sea-bottom, volcanic mud.

A fragment of the anterior region of a comparatively large form, the greatest diameter, which is immediately behind the head, being 4 mm., and the length about 10 mm. Grube's specimen was larger and more complete, measuring 83 mm. in length by 7 mm. in breadth.

The snout is flattened and broadly spatulate anteriorly, the margin being somewhat rectangular. A shallow groove occurs in the middle line, with a slight elevation on each side. Just where the fold of the buccal segment runs forward to meet the margin of the flattened region of the snout a well-marked slit occurs on each side, and may be connected with a sensory, or, as Grube says, a secretory function. No tentacles are present in the species, and this is exceptional in the family. The next segment bears dorsally the marks of four branchial processes on each side, the two inner occurring in a transverse line, while the two outer are placed in a line running obliquely outward and forward from the foregoing. In the centre of the bases of these organs are certain small chitinous masses of an elongate-ovoid shape, resembling undeveloped spines. No trace of paleolæ is visible. Grube describes the branchiæ as broadly lanceolate, the posterior with long tapering tips, which extend considerably beyond the frontal margin.

There are fifteen pairs of bristle-bundles on each side, and their structure agrees with that usually met with in the family, viz., each possesses a stoutish shaft, with a well-marked terminal wing. The shorter series in each tuft is also stout and furnished with wings. The bristle-papillæ are less prominent than the larger hook-pads beneath, so that both are seen from the dorsum.

The hooks (Pl. XXVIA. fig. 25) possess five well-defined teeth, the middle being that most developed. The inferior fang has beneath it a small mucro, so that there is a double curve between it and the terminal process. The body of the hook is marked by bold transverse lines which pass into the bases of the three middle teeth.

The greyish mud in the alimentary canal is very rich in Diatoms, and there are also a few Radiolarians and other organisms.

A glance at the body-wall (Pl. XXXVIIA. fig. 6) in section shows that the type differs from that of any other member of the group. The cuticular and hypodermic